Product Information	
RecA	
Part Number	Y9260L
Concentration	2.0 mg/mL
Unit Size	1.5 mg
Storage Temperature	-25ºC to -15ºC
Lot Number	
Reference Number	

Product Description: RecA functions in DNA recombination and DNA repair (1,2,3). RecA binds to single stranded DNA, resulting in the polymerization of RecA into a nucleoprotein complex. This complex can align with complementary double stranded DNA, resulting in RecA catalysis of DNA strand exchange. RecA DNA binding is stimulated by ATP hydrolysis or non-hydrolyzable ATP analogs. The RecA-ATP-single stranded DNA complex also can function as a coprotease factor in the proteolytic cleavage of LexA, UmuD and certain bacteriophage proteins. RecA complexed with site-specific oligonucleotides have been used to target and specifically cleave large DNA fragments (4).

Product Specifications					
Y9260					
Assay	**SDS Purity**	**SS Exonuclease**	**DS Exonuclease**	**DS Endonuclease**	**E. coli DNA Contamination**
Units Tested	**n/a**	**2µg**	**2µg**	**2µg**	**2µg**
Specification	>95%	<5.0% Released	<1.0% Released	No Conversion	<10 copies

Source of Protein: A recombinant E. coli strain overexpressing E. coli recA from a plasmid.

Unit Definition: Sold by mass of pure protein determined at OD280 (A280 = 0.516 at 1 mg/mL, 1cm)..

Molecular weight: 37,973 Daltons

Quality Control Analysis:

Protein Concentration (OD_{280}) is determined by OD_{280} absorbance.

Physical Purity is evaluated by SDS-PAGE of concentrated and diluted enzyme solutions followed by silver stain detection. Purity is assessed by comparing the aggregate mass of contaminant bands in the concentrated sample to the mass of the protein of interest band in the diluted sample.

Single-Stranded Exonuclease is determined in a 50 µL reaction containing a radiolabeled single-stranded DNA substrate and 10 µL of enzyme solution incubated for 4 hours at 37°C.

Double-Stranded Exonuclease is determined in a 50 µl reaction containing a radiolabeled double-stranded DNA substrate and 10 µL of enzyme solution incubated for 4 hours at 37°C.

Double-Stranded Endonuclease is determined in a 50 µL reaction containing 0.5 µg of plasmid DNA and 10 µL of enzyme solution incubated for 4 hours at 37°C.

E.coli 16S rDNA Contamination is evaluated using 5 µL **r**eplicate samples of enzyme solution denatured and screened in a TaqMan qPCR assay for the presence of contaminating *E.coli* genomic DNA using oligonucleotide primers corresponding to the 16S rRNA locus.

Limitations of Use

This product was developed, manufactured, and sold for *in vitro* use only. The product is not suitable for administration to humans or animals. SDS sheets relevant to this product are available upon request.

Supplied in: 10mM Tris-HCl, 1mM DTT. 0.1 mM EDTA 50% glycerol pH 7.5 @ 25ºC.
Supplied with:
10X RecA Reaction Buffer (B9260): 700mM Tris-HCl, 100mM $MgCl_2$, 50mM DTT pH 7.6 @ 25ºC.

References:
1. Cox MM. (2007) Crit Rev Biochem Mol Biol 42 41-63.
2. Bell CE. (2005) Mol Microbiol 58 358-66.
3. Xing X, Bell CE. (2004)J Mol Biol 342 1471-85.
4. Ferrin LJ, Camerini-Otero RD. (1991) Science. 254 1494-7.